

WHAT IS CLAIMED IS:

1. A method for transmitting and receiving frames of a MAC (Medium Access Control) protocol layer module that processes data frames and control frames transferred from a MANET (Mobile Ad Hoc Network) protocol layer module in a station that receives frames transmitted through a MANET including a plurality of stations, the method comprising the steps of:

- (1) distinguishing between control frames and data frames when analyzing frames transferred from the MANET protocol layer module;
- (2) providing the control frames with a higher priority than the data frames, thereby enabling the control frames to preempt a medium earlier than the data frames; and
- (3) transmitting the control frames and the data frames in an order according to their respective priorities.

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2. The method as claimed in claim 1, wherein the MANET protocol layer module transfers a frame control field, which includes a 'type' area indicating MANET data and a 'Subtype' area, to the MAC protocol layer module.

3. The method as claimed in claim 2, wherein the MANET protocol layer module transfers the frame control field to the MAC protocol layer module, in setting discrimination values into the 'Subtype' area of the frame control field to distinguish between the control frames and the data frames.

4. The method as claimed in claim 3, wherein the step (2) comprises a sub-step in which the MAC protocol layer module sets discrimination values into the 'Subtype' area of the frame control field to discriminate the priority of the data frames and the control frames.

5. The method as claimed in claim 4, further comprising changing the discrimination values to increase the priority by one phase when one of medium preemption of the control frames and the data frames have failed.

5 6. A MAC (Medium Access Control) protocol layer module for processing data frames and control frames transferred from a MANET (Mobile Ad Hoc Network) protocol layer module in a station receiving frames transmitted through a MANET including a plurality of stations, the MAC protocol layer module comprising:

10 a frame generation section for generating frames to distinguish whether frames input from the MANET protocol layer module are control frames or data frames;

a priority setting section for providing the control frames with a higher priority as compared to the data frames in the frames generated from the frame

15 generation section; and

a frame transmission/receipt process section for transmitting and receiving the control frames and the data frames according to priorities set by the priority setting section.

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